

SUBCHAPTER C: SURFACE DISPOSAL

§§312.61 - 312.68

Effective September 1, 2003

§312.61. Applicability.

(a) This subchapter applies to any person who prepares sewage sludge that is placed on a surface disposal site, to the owner/operator of a surface disposal site, to sewage sludge placed on a surface disposal site, and to a surface disposal site.

(b) This subchapter does not apply to sewage sludge stored on the land or to the land on which sewage sludge is stored when the storage period is two years or less and the sewage sludge is stored at a treatment works authorized for such storage.

(c) This subchapter does not apply to sewage sludge at a treatment works authorized for such storage that remains on the land for longer than two years but less than five years when the person who prepares the sewage sludge demonstrates that the land on which the sewage sludge remains is not an active sludge unit or surface disposal site. The demonstration shall include the following information, which shall be reviewed and approved by the executive director and retained by the person who prepares the sewage sludge for the period that the sewage sludge remains on the land:

- (1) the name and address of the person who prepared the sewage sludge;
- (2) the name and address of the person who either owns the land or leases the land;
- (3) the location of the land, by latitude and longitude, street address if available, and boundary shown on a 7½ minute quadrangle United States Geological Survey map;
- (4) an explanation of why sewage sludge needs to remain on the land for longer than two years prior to final use or disposal;
- (5) the date by which the sewage sludge will be used or disposed of. This date must clearly maintain a storage period less than five years.

Adopted September 26, 1995

Effective October 13, 1995

§312.62. General Requirements.

(a) No person shall place sewage sludge on an active sludge unit unless the requirements in this subchapter are met.

(b) An active sludge unit located within 60 meters of a fault that has displacement in Holocene

time, located in an unstable area, or located in a wetland, except as provided in a permit issued pursuant to §402 or §404 of the CWA, shall close within one year from the effective date of this regulation.

(c) The owner/operator of an active sludge unit shall submit a written "closure and post closure plan" to the executive director, for approval, at least 180 days prior to the date that the active sludge unit closes. The plan shall describe how the sludge unit will be closed and, at a minimum, shall include:

(1) a discussion of how the leachate collection system will be operated and maintained for three years after the sludge unit closes if the sludge unit has a liner and leachate collection system;

(2) a description of the system used to monitor for methane gas in the air in any structures within the surface disposal site and in the air at the property line of the surface disposal site, as required in §312.64(j) of this title (relating to Management Practices);

(3) a discussion of how public access to the surface disposal site will be restricted for a minimum of three years after the last sludge unit in the surface disposal site closes.

(4) The final cover system for aerial fills (mono - fills) shall be composed of no less than two feet of soil. The first 18 inches or more of cover shall be of clayey soil, classification SC or CL as defined in the "Unified Soils Classification System" developed by the United States Army Corps of Engineers, compacted in layers of no more than six inches to minimize the potential for water infiltration. A CH soil may be used; however, this soil may experience excessive cracking and shall therefore be covered by a minimum of 12 inches of topsoil to retain moisture. Other types of soil may be used with prior written approval from the executive director. The final six inches of cover shall be of suitable topsoil that is capable of sustaining native plant growth and shall be seeded or sodded immediately following the application of the final cover in order to minimize erosion. Side slopes of the final cover for all above-ground disposal areas (mono-fills) shall not exceed a 25% grade (four feet horizontal to one foot vertical). Side slopes for the final cover in excess of 25% may be authorized by the executive director provided that controlled drainage such as flumes, diversion terraces, spillways, or other acceptable methods are incorporated into the final cover system design submitted to the executive director for review and approval. The final cover for the topmost portion of a unit or facility shall have a gradient of not less than 2.0% and not greater than 6.0%, and shall possess a sufficient minimum grade to preclude ponding of surface water when total fill height and expected subsidence are taken into consideration.

(d) The owner/operator shall comply with the post-closure care maintenance requirements for final cover, as detailed in paragraphs (1) and (2) of this subsection for the duration of the post-closure period for these units or sites.

(1) For a minimum of the first three years after the completion of final closure, the permittee shall retain the right of entry to and maintain all rights-of-way of a closed surface disposal

site in order to conduct periodic inspections of the closed site. The owner/operator shall correct, as needed, erosion of cover material, lack of vegetative growth, leachate or methane migration, and subsidence, or ponding of water on the unit or site. If any of these problems occur after the end of the three-year post closure maintenance period or persist for longer than the first three years of post-closure care maintenance, the owner/operator shall be responsible for any corrections until the executive director determines that all problems have been adequately resolved. The executive director may reduce the post-closure maintenance period for surface disposal sites if all wastes and waste residues have been removed during closure.

(2) Any monitoring programs (ground-water monitoring, resistivity surveys, methane monitoring, etc.) in effect during the life of the surface disposal site shall be continued during the post-closure care maintenance period.

(e) Following completion of the post-closure care maintenance period for each surface disposal site, the owner/operator shall submit to the executive director for review and approval a documented certification, signed by an independent Texas registered professional engineer, verifying that post-closure care maintenance has been completed in accordance with the approved post-closure plan. The submittal to the executive director shall include all applicable documentation necessary for the certification of completion of post-closure care maintenance. Once approved, this certification shall be retained by the owner/operator.

(f) Deed Recordation Notification.

(1) No person shall place sewage sludge on an active sludge unit prior to recording, in the deed records of the county or counties in which the disposal takes place, the following information:

(A) a metes and bounds description of the portion(s) of the tract of land on which disposal of sewage sludge will take place;

(B) a detailed description of the sewage sludge which is to be disposed of;

(C) all pertinent information related to the permit to dispose of sewage sludge, including at least the permit number and issuing agency; and

(D) the name and permanent address of the person or persons operating the facility where more specific information on the waste can be secured.

(2) Proof of recordation shall be provided to the executive director before the commission issues a permit.

(g) The commission shall require evidence of financial responsibility as it deems appropriate to assure the commission that the responsible owner or operator has sufficient assets to properly

operate the site and to provide proper closure and post-closure. This assurance for the proper operation of the

site may be in the form of performance bonds, letters of credit from recognized financial institutions, trust funds, or insurance.

Adopted September 26, 1995

Effective October 13, 1995

§312.63. Metal Limits (other than domestic septage).

(a) Except as provided in subsection (b) of this section, the concentration for each metal listed in Table 6 in sewage sludge placed on an active sludge unit that does not have a liner and leachate collection system shall be equal to or less than concentration for the metal in Table 6

TABLE 6 - Metal CONCENTRATIONS

Metal	Concentration (milligrams per kilogram*)
Arsenic	73
Chromium	600
Nickel	420

* (Dry weight basis)

(b) The concentration of each metal listed in Table 6 of subsection (a) of this section in sewage sludge placed on an active sludge unit whose boundary is less than 150 meters from the property line of the surface disposal site shall not exceed the concentration determined using the following procedure.

(1) The shortest actual distance from the active sludge unit boundary to the property line of the surface disposal site shall be determined.

(2) The concentration of each metal listed in Table 7 in the sewage sludge shall not exceed the concentration in Table 7 that corresponds to the actual distance as described in paragraph (1) of this subsection.

TABLE 7 - Metal CONCENTRATIONS

Unit boundary to property line distance (meters)	Metal concentration*		
	Arsenic (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)
0 to less than 25	30	200	210
25 to less than 50	34	220	240
50 to less than 75	39	260	270
75 to less than 100	46	300	320
100 to less than 125	53	360	390
125 to less than 150	62	450	420

* Dry weight basis

Adopted September 26, 1995

Effective October 13, 1995

§312.64. Management Practices.

(a) Sewage sludge shall not be placed on an active sludge unit if it is likely to adversely affect a threatened or endangered species listed under the Endangered Species Act, §4, or its designated critical habitat.

(b) An active sludge unit shall not restrict the flow of the 100-year flood nor be located within the 100-year floodway.

(c) When a surface disposal site is located in a seismic impact zone, each sludge unit in that site shall be designed to withstand the maximum recorded horizontal ground-level acceleration.

(d) An active sludge unit shall be located 60 meters or more from a fault that has displacement in Holocene time, unless otherwise approved by the commission.

(e) An active sludge unit shall not be located in an unstable area.

(f) An active sludge unit shall not be located in a wetland except as provided in permit issued under the Clean Water Act, §402 or §404.

(g) Runoff from an active sludge unit shall be collected and disposed in accordance with discharge permit requirements and any other applicable requirements. The runoff collection system

for an active sludge unit shall have the capacity to handle runoff from a 25-year, 24-hour rainfall event.

(h) The leachate collection system for an active sludge unit that has a liner and leachate collection system shall be operated and maintained during the period the sludge unit is active and for three years after the sludge unit closes.

(i) Leachate from an active sludge unit that has a liner and leachate collection system shall be collected and disposed in accordance with the applicable requirements during the period the sludge unit is active and for three years after the sludge unit closes.

(j) When a cover is placed on an active sewage sludge unit, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25% of the lower explosive limit for methane gas during the period that the sewage sludge unit is active and the concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit for methane gas during the period that the sludge unit is active. When a final cover is placed on a sludge unit at closure, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25% of the lower explosive limit for methane gas for three years after the sludge unit closes and the concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit for methane gas for three years after the sludge unit closes. On a case by case basis, the executive director may consider exclusion from these requirements.

(k) A food crop, a feed crop, or a fiber crop shall not be grown on an active sludge unit, unless the owner/operator of the surface disposal site demonstrates to the commission that through additional management practices, public health and the environment are protected from any reasonably anticipated adverse effects of metals in sewage sludge when crops are grown.

(l) Animals shall not be grazed on an active sludge unit, unless the owner/operator of the surface disposal site demonstrates to the commission that through additional management practices, public health and the environment are protected from any reasonably anticipated adverse effects of metals in sewage sludge when animals are grazed.

(m) Public access to a surface disposal site shall be restricted during the period that the surface disposal site contains an active sludge unit and for a period of three years after the last active sludge unit in the surface disposal site closes. The means of restricting access to a surface disposal site shall be effective with consideration of the location of the site and adjacent land use(s).

(1) The permit application shall include an explanation of the means for restricting access to a surface disposal site.

(2) The executive director shall include, as a condition of the proposed permit, specific requirements for the means of restricting access to a surface disposal site.

(n) Sewage sludge placed on an active sludge unit must not contaminate an aquifer. Results of a groundwater monitoring program developed by a licensed professional geoscientist or licensed professional engineer or a certification by a licensed professional geoscientist or licensed professional engineer shall be used to demonstrate that sewage sludge placed on an active sludge unit does not contaminate an aquifer. The results or certification shall be signed, sealed, and dated by the licensed professional geoscientist or licensed professional engineer preparing the results or certification.

Adopted July 23, 2003

Effective September 1, 2003

§312.65. Operational Standards - Pathogen and Vector Attraction.

(a) Pathogen reduction. Sewage sludge (other than domestic septage). The Class A pathogen reduction requirements in §312.82(a) of this title (relating to Pathogen Reduction) or the Class B pathogen reduction requirements in §312.82(b)(1)(A) and (b)(2) of this title shall be met when sewage sludge is placed on an active sludge unit, unless the vector attraction reduction requirements in §312.83(b)(11) of this title (relating to Vector Attraction Reduction) is met.

(b) Pathogen reduction. Domestic septage. The pathogen reduction requirement in §312.82(c)(2) of this title shall be met when domestic septage is placed on an active sludge unit.

(c) Vector attraction reduction. Sewage sludge (other than domestic septage). One of the alternatives for vector attraction reduction in §312.83(b)(1)-(11) of this title shall be met when sewage sludge is placed on an active sludge unit.

(d) Vector attraction reduction. Domestic septage. The vector attraction reduction requirement in §312.83(b)(12) of this title shall be met when domestic septage is placed on an active sludge unit.

Adopted September 26, 1995

Effective October 13, 1995

§312.66. Frequency of Monitoring.

(a) Sewage sludge other than domestic septage.

(1) When required by this subchapter, the frequency of monitoring for the metals in Table 6 and Table 7 of §312.63(a) and (b) of this title (relating to Metal Limits), the pathogen density requirements in §312.82(a) of this title (relating to Pathogen Reduction) and in §312.82(b) of this title (relating to Vector Attraction Reduction), and the vector attraction reduction requirements in §312.83(b)(1)-(8) of this title, for sewage sludge placed on an active sludge unit shall be the frequency in Table 8.

TABLE 8 - FREQUENCY OF MONITORING

Amount of sewage sludge* metric tons per 365-day period	Frequency
Greater than zero but less than 290	once per year
Equal to or greater than 290 but less than 1,500	once per quarter (four times per year)
Equal to or greater than 1,500 but less than 15, 000	once per 60 days (six times per year)
Equal to or greater than 15,000	once per month (12 times per year)

* Amount of sewage sludge placed on an active sewage sludge unit (dry weight basis).

(2) The commission may increase or decrease the frequency of monitoring required in paragraph (1) of this subsection after the sewage sludge is monitored for two years at the frequency in Table 8. The increase in frequency of monitoring should only increase to the next highest frequency for each two year period and then may be lowered in the same manner. In no case shall the frequency of monitoring be less than the frequency required in Table 8 if sewage sludge is placed on an active sludge unit.

(b) If the vector attraction reduction requirements in §312.83(b)(12) of this title are met when domestic septage is placed on an active sewage sludge unit, each individual container of domestic septage shall be monitored for compliance with those requirements.

(c) Air in structures within a surface disposal site and at the property line of the surface disposal site shall be monitored continuously for methane gas during the period the surface disposal site contains an active sludge unit on which the sewage sludge is covered and for three years after a sludge unit closes if a final cover is placed on the sewage sludge.

Adopted September 26, 1995

Effective October 13, 1995

§312.67. Record Keeping.

(a) When sewage sludge (other than domestic septage) is placed on an active sludge unit.

(1) The person who prepares the sewage sludge shall develop the following information and shall retain the information for five years.

(A) The concentration of each metal listed in Table 6 of §312.63(a) of this title (relating to Metal Limits) in the sewage sludge when the metal concentrations in Table 6 are met.

(B) The following certification statement: "I certify, under penalty of law, that the management practices in 30 TAC §312.64; the pathogen requirements in (insert the citation to the specific pathogen reduction requirements that are met from §312.82 of this title (relating to Pathogen Reduction)) and the vector attraction reduction requirements in (insert the citation to the specific vector attraction reduction requirements that are met from §312.83(b) of this title (relating to Vector Attraction Reduction) when one of those requirements is met) have been met. This determination has been made under my direction and supervision in accordance with the system designed to assure that qualified personnel properly gather and evaluate the information used to determine that the (specific requirements for pathogen and vector attraction reduction (when appropriate)) have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(C) A description of how the pathogen reduction requirements in §312.82(a) of this title are met when any of those requirements are met.

(D) A description of how one of the vector attraction reduction requirements in §312.83(b) of this title are met when required.

(2) The owner/operator of the surface disposal site shall develop the following information and shall retain that information for five years.

(A) The concentration of each metal listed in Table 7 of §312.63(b) of this title in the sewage sludge when the metal concentrations in Table 7 are met.

(B) The following certification statement: "I certify, under penalty of law, that the management practices in 30 TAC §312.64 and the vector attraction reduction requirements in (insert the citation to the specific requirements that are met from §312.83(b) of this title (relating to Vector Attraction Reduction)) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices (and specific requirements for vector attraction reduction (when appropriate)) have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(C) A description of how the management practices in §312.64 of this title (relating to Management Practices) are met.

(D) A description of how one of the vector attraction reduction requirements in §312.83 of this title (relating to Vector Attraction Reduction) are met when required.

(b) When domestic septage is placed on an active sludge unit.

(1) When the vector attraction reduction requirements in §312.83(b)(12) of this title (relating to Vector Attraction Reduction) are met, the person who places the domestic septage on the surface disposal site shall develop the following information and shall retain the information for five years:

(A) The following certification statement: "I certify, under penalty of law, that the vector attraction reduction requirements in 30 TAC §312.83(b)(12) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(B) A description of how the vector attraction reduction requirements in §312.83(b)(12) of this title (relating to Vector Attraction Reduction) are met.

(2) The owner/operator of the surface disposal site shall develop the following information and shall retain that information for five years:

(A) The following certification statement: "I certify, under penalty of law, that the management practices in 30 Texas Administrative Code §312.64 and the vector attraction reduction requirements in (insert the citation to the specific vector attraction reduction requirements that are met from §312.83 of this title) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices (and vector attraction reduction requirements (when appropriate)) have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(B) A description of how the management practices in §312.64 of this title are met.

(C) A description of how one of the vector attraction reduction requirements in §312.83 of this title are met when required.

Adopted September 26, 1995

Effective October 13, 1995

§312.68. Reporting.

All facilities regulated under this subchapter shall submit the information required in §312.67(a) of this title (relating to Record Keeping) to the commission by September 1 each year.

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Effective October 13, 1995